

# Creating and Sustaining Inquiry Spaces For Teacher Learning and System Transformation

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## The Context

Over a 15-year period, one Western Canadian province has been exploring the potential of inquiry learning networks to deepen teacher professional learning and to influence the system as a whole. During this time, we have learned a great deal about shifting practice through inquiry networks. In this article, we provide a description of the key features of the inquiry framework that has evolved through this work, offer suggestions for creating and sustaining influential educator networks and provide some observations about how this approach is shifting practices at the classroom, school, university and policy levels.

## School Networks as Inquiry Spaces

In British Columbia (BC), the first systematic inquiry network, the Network of Performance-Based Schools (NPBS) was established in 1999. The focus of the teacher-principal teams who voluntarily joined this networked inquiry community was to apply formative assessment strategies and learning progressions in the four areas of citizenship, reading, writing and mathematic problem solving. From its inception, a primary goal of the work was to transform schools and the BC system as a whole from a focus on sorting (using summative assessment to sort and rank learners) to a learning-oriented system that emphasised both equity and quality in learner outcomes. Secondary goals for the network were to strengthen cross-role and cross-district teamwork and to promote greater sharing of knowledge and expertise at all levels.

The network structure was and continues to be straightforward. Teams of educators and support staff at the school level develop a year-long inquiry in an area of importance to them. They pursue strategies to significantly shift learner achievement, using well-constructed learning progressions as the central way of assessing the results of their shared work. Formal meetings of the inquiry teams take place three times a year and a provincial seminar is held each spring. Key practitioners, academics and all the regional network leaders attend. Each network school teams also present their work to their colleagues in regional showcase sessions and submit short cases that are posted on the network website ([www.noi.ca](http://www.noi.ca)). Upon completion of the case study, schools receive a small micro-credit grant to recognise their public contribution to the networked community. These funds are used to purchase resources, fund release time or gain new professional learning by visiting other network schools or attending the annual seminar.

## Evolution

This original network of schools grew organically over the first six years. The success of the network in attracting the interest of teacher leaders and in shifting outcomes for learners drew the attention of health educators. This interest led to

the formation of a Healthy Schools Network in 2006. This new network focused on advancing the health of young people in schools by drawing attention to fitness, nutrition and social and emotional well-being. This work emphasised connection with local community health providers and the development of a comprehensive school health culture. Key teacher leaders were commissioned to develop learning progressions in the area of healthy living which were then used to inform the inquiry process and assess the impact on learners in these healthy schools.

In 2008, the Director of Aboriginal Education at the Ministry of Education asked whether network participants would consider adding two goals to inquiry investigations first, to improve the learning and graduation outcomes for learners from indigenous backgrounds and second, to change the perceptions of all learners so that every young person in the province graduated with a deeper understanding of Aboriginal culture, history and ways of knowing. As a result, the Aboriginal Enhancement Schools Network was launched. By 2013–2014, this network included more than 100 schools and 700 support workers, teachers, principals and vice-principals and district leaders from across the province. Local foundation financial support in 2013 allowed network participants to focus more deeply on two specific areas. Many elementary schools emphasised supporting students to pursue individual inquiries around issues of indigenous identity and culture. At the secondary and middle school levels, school teams worked to develop school-wide strategies to increase successful transitions from one level to the next for learners from indigenous backgrounds.

In 2009, Vancouver was the host city for the 22<sup>nd</sup> meeting of the International Congress of School Effectiveness and Improvement (ICSEI). Its theme was ‘New departures for a learning world of quality and equity’. At the Congress, David Istance from the Centre for Educational Research and Innovation at OECD introduced delegates to the research study on Innovative Learning Environments (ILE). Practitioners and policymakers attending the Congress were very interested in this study and in the provocative questions it raised. Shortly after that, British Columbia officially became part of the ILE study and, in 2013, became one of five international learning laboratories for the third and final phase of the study. Network leaders explored the findings in the 2010 OECD publication *The Nature of Learning: using research to inspire practice* and promoted the use of the seven transversal conclusions and learning principles to inform school level inquiries.

In 2012, a name change from NPBS to the Networks of Inquiry and Innovation (NOII) signalled that there were expanding and multiple networks, all using a shared approach to inquiry explorations. The largest of these newer networks is Creating Results for Young Readers (CR4YR), a provincially-supported literacy and inquiry initiative that has educators throughout the province engaged in case study investigations into learning and teaching practices focused on vulnerable early learners. By the spring of 2014, 100 inquiry facilitators and more than 600 primary and support teachers in 200 schools were involved in this networked community.

### Key Factors

From this extended network experience, we suggest that there are six key design factors for networks to transform whole systems:

1. Clarity of purpose through a shared focus on important goals

2. Collaborative inquiry that stimulates evidence-informed learning conversations
3. Trusting relationships that build social capital
4. Persistent leadership for learning
5. Active evidence-seeking regarding impact directly linked to an ongoing theory of action
6. An interdependent connection between the learning communities of the individual schools and the network as a whole.

We have written previously about the factors to be considered in developing effective school-to-school networks (Stoll, Halbert & Kaser 2012). For the purpose of this article, we will focus briefly on the first factor, clarity of purpose, and then more specifically on two frameworks that are being used to inform and guide collaborative inquiry in British Columbia and in associated networks in the Yukon, Australia and New Zealand.

### **Clarity of Purpose and Shared Focus on Important Goals**

We believe that educators are more motivated by HARD goals than they are by SMART (specific, measurable, achievable, realistic and timely) or incremental goals (e.g. 2% improvement per year in reading comprehension for 8-year-olds). What do we mean by this? The acronym 'HARD goals' comes from the work of Murphy (2011) where he suggests that commitment grows when goals *are heartfelt, animated, required and difficult*. In the BC context, three hard goals have evolved from the thinking across network schools and are now shaping the thinking and actions of new participants. Educators in BC have responded positively to these three goals and they are now referenced in many district plans as well as in the provincial education plan:

1. Every learner crossing the stage with dignity, purpose and options.
2. All learners leaving our settings more curious than when they arrive.
3. Every learner with an understanding of and respect for Aboriginal culture, history and ways of knowing.

Network members recognise that these are ambitious goals; indeed, they are hard goals. There is a specific contextual rationale for each of them. The first, *every learner crossing the stage with dignity, purpose and options*, is a matter of social justice. It is connected to a desire for both quality and equity. It has been well documented in Canada and elsewhere that young people who complete secondary school and go on to some form of post-secondary training for two years have much better long term health and social outcomes. We have argued elsewhere (Kaser & Halbert, 2009) that this goal signals the need for system transformation — from a focus on sorting and high levels of success for some to a focus on deep learning with high levels of quality and equity for all. Achieving this ambitious goal requires new forms of teamwork, new approaches to pedagogy, new conceptions of leadership, and a sustained focus on moral purpose.

The second goal speaks directly to student engagement and intellectual curiosity. In BC, educators share this perspective: young children enter schools in kindergarten filled with questions and the desire to learn. Somewhere along the way to adolescence, this enthusiasm is replaced for many learners by 'doing school' rather than by loving learning. Indeed, 50% of Canadian 15-year-olds report that

they do not find school intellectually engaging. The pressures of multiple curriculum outcomes and the perceived demands from parents and post-secondary institutions often lead teachers to a diminished sense of efficacy that translates into focusing on coverage rather than depth.

The third goal of ensuring that all learners develop an understanding of and respect for Aboriginal perspectives is gaining momentum and importance, not just in Canada, but also in New Zealand, Australia and other nations with indigenous populations. This, too, is a matter of social justice and goes to the heart of the equity challenge.

These goals speak to the challenges of equity and quality in our system. To achieve progress towards these goals requires concerted effort and focused action. Two frameworks are proving to be particularly useful in creating coherence and developing informed action at the classroom, school, system and network level:

1. A learning framework informed by the seven learning principles from the innovative learning environment research.
2. A disciplined framework using a spiral of inquiry.

### **Learning Principles**

The seven learning principles in this framework have evolved through an exploration of a variety of theoretical perspectives including cognition, emotion and biology. They have been summarised in the final chapter of *The Nature of Learning: Using Research to Inspire Practice* (OECD 2010) and have been re-written for use by practitioners in professional learning settings in a user-friendly guide ([www.oecd.org/edu/ceri/50300814.pdf](http://www.oecd.org/edu/ceri/50300814.pdf)).

For a learning environment to be deemed truly innovative in the international study, all seven learning principles needed to be evident. For educators in schools or systems that are just getting started on an innovation agenda, tackling all seven at once may be overwhelming. In our jurisdiction, some schools have jumped in to a total re-design process. Other schools have found that a focus on two learning principles at a time is a productive way of creating professional learning for adults and growth for learners. This new learning, in turn, creates a greater appetite and capacity for more comprehensive change. What follows is a very brief summary of the seven learning principles.

#### *Learners at the Centre*

This first principle underlines the importance of learners developing meta-cognitive skills and greater self-regulation. It demands that educators ask themselves whether learners are able to regulate their emotions during the learning process, manage independent learning times, set specific learning goals, and construct their learning through active exploration. This principle also requires that educators actively use a mix of learning strategies, including co-operative learning, inquiry-based approaches and service learning.

#### *The Social Nature of Learning*

The findings from neuroscience research indicate that we learn through social interaction. This means that we need to structure our learning environments to encourage highly social forms of learning, including well-designed cooperative group work. Educators who have drawn on the findings about the impact of designing and using thoughtful group work have noted the positive impact on

intellectual engagement, achievement and affective and behavioural outcomes. Strong programmes encourage both individual and group inquiries from the earliest stages. As learners mature, there are multiple opportunities for autonomous forms of learning.

### *Emotions Matter in Learning*

As we design stronger learning environments, we need to pay attention to the interweaving of emotion, motivation and cognition. The development by each learner of a positive and growth-oriented mindset helps to create the conditions for deep understanding and adaptive competence. It is important that educators develop an understanding of both the theoretical and practical role of emotions in learning. Learners have an important role to play in developing their own motivation to learn. Educators can support learner motivation by making learning both more effective and, where possible, more enjoyable.

### *Individual Differences must be Recognised*

Educators understand that their learners differ in many ways — they have different amounts of prior knowledge and conceptions of learning. Their mindsets may tend more towards a fixed or a growth perspective. Also, their interests are varied. Many educators work with learners who come from a wide range of linguistic, cultural and social backgrounds. The Innovative Learning Environment practitioners guide summarises the implications of this principle for today's educators: *Learning environments need the adaptability to reflect these individual and patterned differences in ways that are sustainable both for the individual learners and for the work of the group as a whole. Moving away from 'one size fits all' may well be a challenge (7).* Although the enactment of this principle may be challenging, our systems need to move in a more personally responsive direction.

### *Every Learner needs to be Stretched without being Overloaded*

The researchers who studied innovative practitioners found that the successful designs were those that involved teams of educators who create programmes that challenge young people with engaging and hard work, while at the same time avoiding excessive overload. They avoided practices that resulted in 'demotivating regimes based on grind, fear and excessive pressure' (7). Many innovators have created opportunities for higher achieving learners to assist those who were struggling or for older learners to assist younger ones in ways that stretched the capacities of both groups. Successful programmes found ways to make sure that little time was spent on 'coasting'.

### *Assessment for Learning is Essential*

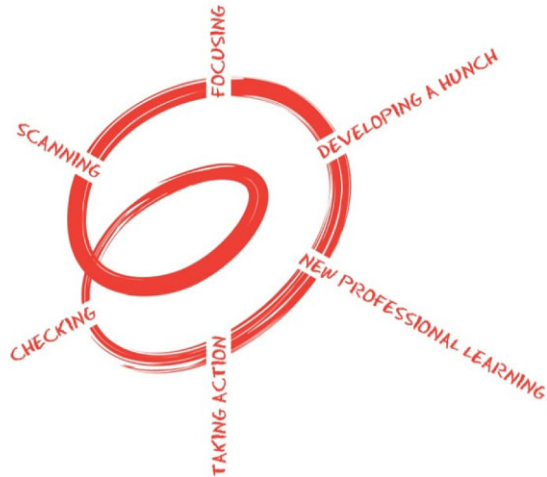
Successful innovative learning environments are those with clear expectations. This clarity is achieved by shifting assessment practices in a formative direction, with ongoing coaching available to support learner growth. Learners understand and are able to articulate *why* what they are learning is important. The use of these formative assessment practices assists in creating more self-regulated learners who are able to see how what they are learning fits into broader knowledge frameworks. Learners in these environments receive regular, thoughtful and meaningful feedback on an ongoing basis. In addition, feedback from the learners is used to shape the overall learning environment.

*Building Horizontal Connections Creates Meaning*

Strong innovative learning environments are able to build in all seven learning principles into their designs. Learners develop the ability to understand over time how to build more basic pieces of knowledge into more complex structures. This gives the individual learner increasing abilities to transfer understanding to new situations, a competency that is critical for navigating in this current century. Thoughtful links between disciplines through inquiry and problem-based learning can make a contribution to this adaptive competency development. Also, ongoing connections to the wider natural and social environments can create more powerful ways for learners to develop deeper levels of understanding. Many educators have found that making links with the natural environment, other cultures, seniors, community members and artists have added richness to the learning programmes of young people.

The learning principles provide a foundational framework for educators to assess and then transform the learning experiences of their learners. The spiral of inquiry has been critical to moving the learning principles into learning and teaching action.

**What's going on for our learners?  
How do we know?  
Why does this matter?**

**Spiral of Inquiry****Inquiry Models**

In working with networks of schools in BC, the leadership team examined a variety of inquiry models designed to create equity and quality outcomes for all learners. This investigation included district, teacher federation and teacher preparation approaches within the province, as well as the challenges and successes of networks in Alberta, San Francisco Bay and New York (Panero & Talbert, 2013). Ongoing networks of inquiry in Ontario, the UK, Wales, Australia, Switzerland, the Scandinavian countries and New Zealand were also part of this study. As a result of these investigations, and in partnership with Helen Timperley from New Zealand, we developed an inquiry model (Halbert & Kaser, 2013) for the provincial networks. This model was based on Timperley's large-scale professional learning research findings (Timperley, 2011) combined with the insights from school and network case studies in B.C. (Kaser & Halbert, 2009). The model is currently



being used at all levels of the system — individual learners are using it to pursue student-generated inquiries and teams of teachers are using it as their professional growth model. Hundreds of schools have adopted the use of the spiral framework and many entire districts are using the approach. Recently, university faculties of education are using it in their undergraduate and graduate programmes.

The spiral model uses the key stages of scanning, focusing, developing a hunch, engaging in new professional learning, taking new professional action, checking that a big enough difference has been made — and then taking time to consider what comes next. Although the stages in the spiral often overlap, inquiry teams have noted that paying attention to each aspect was critical in achieving the greatest benefit for all learners. At every stage, inquiry teams ask themselves three important questions: **‘What’s going on for our learners?’ ‘How do we know?’** and **‘Why does this matter?’** These questions are at the core of the inquiry and evidence-seeking mindsets that teams demonstrate in their explorations. The first two questions constantly prompt educators to check that learners are at the heart of what they do and that educators are basing their decisions on thoughtful evidence from direct observations. The third question helps to ground teams in the importance of the inquiries they are pursuing. Persisting as teams with inquiry minded practices transforms outcomes for learners. Always coming back to the experiences of the learners being served maintains the focus where it must be — on the learners.

#### *Scanning: What’s going on for our Learners?*

Scanning means that inquiry work begins by asking: *What is going on for our learners?* Almost everyone in a school community will have opinions about what is going on for learners. Scanning is about collecting a variety of rich evidence about what is really going on for learners — and this process takes time. Productive, inquiry-focused teams do not rush, nor do they dwell forever at this stage. In a reasonable amount of time (generally one to three months), school inquiry teams gather and consider a great deal of useful information in key areas of learning. These areas include creativity, the arts, physical activity, empathy, learner well being and deeper understanding of other cultures for all learners. Incorporating the seven principles into the scanning process ensures that key aspects of learning — and of the learners’ experiences — are not overlooked.

#### *Focusing: Where are we going to Place our Attention?*

Thorough scanning provides inquiry teams with many insights into what is going on for learners. In the focusing phase, teams ask themselves: *Where are we going to concentrate our professional energies so that we can change the experience and results for our learners?* Gaining greater clarity about the problem to be addressed is at the heart of the focus phase. Sometimes, the scanning process results in a confusing picture that requires deeper investigation. For example, an initial scan may identify that some learners are deeply engaged in their learning, while others are not. Some learners express a great deal of interest in particular content areas; others say they are bored. Some learners are making good progress in developing key competencies; others are stalled. Knowing this is helpful but more information is required. The inquiry team explores *why* learners are not engaged and discover under what conditions this is the case. Listening to what disengaged learners have to say helps to inform and shape new understandings. Also, the team explores what is working

for those learners who **are** engaged. Identifying strengths, as well as problems and challenges, is important for a fuller picture of what is going on for learners. A clear focus can be energising and morale boosting, leading to both short term wins and longer term understandings. Once the team has a sense of where the focus should be, other potentially interesting and competing possibilities need to be delayed or judiciously combined.

This dynamic presents a key challenge for caring educators who want to do everything all at once and requires judgements based on a thorough understanding of the context and culture of the school. The result of a fragmented or scattered focus is educator overload and little or no positive impact for learners. Inquiry teams have found that it was critically important that they avoid premature decisions about what to do. Generally, they have found that they need to have the courage to slow down at this stage and develop a deeper understanding of what is going on in one or two areas under consideration before moving to hasty action.

*Developing a Hunch: what is leading to this situation and how are we contributing to it?*

The phases in this spiral of inquiry framework often overlap. At each stage, as inquiry teams ask themselves ‘how do we know?’ and ‘why does this matter?’ new insights will emerge. Evidence from one stage informs the next. Surprises are inevitable and are welcomed by teams with an inquiry mindset. Surprises can open up the opportunity for reflection and new understandings. The hunch stage asks educators to probe ‘what’s leading to this situation?’ and, every bit as important, ‘how are *we* contributing to it?’ Everyone has hunches about why things are the way they are. Some hold passionately to these views. Getting these views onto the table in a way that they can be discussed and tested is fundamental to moving forward together. Trust is built through respectful listening to diverse points of view, a process which requires honesty and courage. If there is no genuine commitment to listening to varied perspectives, then commitment to action will be undermined. Serious and informed conversations must take place in staff rooms and staff meetings — not just in the parking lot.

At this stage in the spiral, it is important to invite students and community members to offer their views. They have unique insights and perspectives that need to be considered. Their answers to the questions about what is leading to the current situation are often different from the professionals. As hunches are generated inquiry teams work hard to keep the focus on areas over which educators in the school have influence. There is no point in blaming parents, the community, the elementary school or the absence of a pre-school programme. The guiding question has to be *how are we contributing to this situation?* rather than blaming the learners for their lack of interest — or their family circumstances. The hunch phase requires that inquiry teams stand back and take a serious look at what is contributing to the current situation for learners. Teams reflect on how they as educators are contributing to the situation in a way that opens up thinking and doesn’t shut the door on thinking or curiosity.

*New Professional Learning: how and where will we learn more about what to do?*

All phases of the inquiry spiral involve learning, but at this stage teams engage with the specific task of carefully designing professional learning. At this point, inquiry



leadership teams help teachers to identify *how and where can they learn more about what to do*. The professional learning focus flows organically from testing the hunches about what is leading to the situation for learners. This stage is critical. If teachers and principals knew how to make the needed changes to practice they would already be doing so. The key issue is to decide what to learn and how to access the new learning. It is important to use formal theories and research evidence as a guide. It is vital at this point to consider the second guiding question: *how do we know?*

The inquiry team must decide if the new learning focus is likely to be effective. It matters that inquiry teams have the professional discipline to draw on strong research and practice studies. Educators have access to evidence about the kinds of practices that are more likely to be effective and this is the time to put that knowledge into practice. A design challenge at this stage is to provide adequate time for all adults to engage in new learning. The evidence on professional learning and improved learner outcomes in significant areas indicates that a year of focused effort is required at the very minimum. One year is good; two years are much better and three may be required. We know from the research studies that a key issue is not whether participation in professional learning is voluntary or mandatory. What is required is that the learning be of the highest possible quality and that it be deeply engaging.

*Taking Action: what will we do differently?*

This is the stage in the inquiry spiral where new learning leads to new practices. Once teams have the evidence and the knowledge about the practices that will help learners, it is time to take action by jumping across the knowing-doing gap. Little or nothing will change for young people unless educators actually *do* things differently. It is not enough to sit at meetings, go to workshops, attend conferences, and develop new insights. At this stage, the inquiry team makes sure that all those involved are supported to try new practices. Taking action in isolation from one's colleagues is rarely effective. Seldom do things go smoothly the very first time. It is all too easy to give up and go back to old ways of operating if we are working on our own.

Teams need to make sure that there are plenty of opportunities for dialogue, observation, reflection, and second, third and fourth tries without fear of judgement or failure. Taking action must be seen as a team sport — not a solo activity. Taking action within a set time frame, generally within two to four weeks, and then reporting back on what has happened helps to sustain momentum. Inquiry teams need to establish a process for team support and team reflection that will work within the individual school context. Deciding when, where, and how teams will reflect on their actions will create a sense of shared responsibility and support. Peer observations focused specifically on the new strategy being adopted and the perceived impact on learners are helpful. The use of video clips to capture classroom practice is also helpful, especially when the focus is on what is happening for the learners. At this stage of the spiral, issues of trust and support are again highlighted. In some cases, teachers may try new practices and remain a bit puzzled about how they worked. They may need more time and more practice to develop the confidence that things are working. In some cases, the new practices will have immediate positive benefits for learners. In very few cases will everything work well straight away. Changing practice can feel risky for a lot of teachers and

inquiry teams need to find ways to make the risk-taking less risky. Without support, teachers may hold back from persevering with changes. We have seen repeatedly that when teachers have the support of their colleagues to persist in implementing new and stronger learning practices, they do persevere and they do make gains for learners.

*Checking: have we made a big enough difference?*

The purpose of the inquiry spiral is to make a difference to valued outcomes for learners. Changes in practice do not always lead to substantive improvement and it is at this part of the spiral that inquiry teams ask whether they are making **enough** of a difference. Agreeing ahead of time on the evidence sources that will be used to determine the degree of change is essential. The evidence that surfaced in the scanning and focusing phases will provide the basis for checking. It is also possible that as teams work through the various stages of the spiral they identify additional important sources of evidence. For instance, inquiry teams may have identified increasing intellectual engagement of learners as the focus for their inquiry through observations and reflections on learner responses to the three key cognitive questions: *Where are you going with your learning? How is it going? Where to next?* As they sharpen their focus, they learn more about self-regulation and decide to adapt some resources to determine the changes that learners were experiencing. They continued to use the three questions to determine the extent to which the changes they were making in their classroom assessment practices were having an impact. They were developing a richer picture of what was going on for their learners.

There are many ways to check how much difference is being made. The degree of skilled use of social media for learning, in person or written surveys and observations of learner engagement and/or social emotional learning, transition rates, success in challenging academic courses, progress as indicated by movement along the learning progressions all provide useful information. The key is to agree on what evidence to look for and what constitutes enough of a difference. Inquiry actions can only be considered good if significant learner outcomes have improved.

*What is Next: how can we refine and build on our inquiry work?*

The inquiry cycle is constructed as a spiral because once inquiry teams in schools and networks of schools start to engage in serious inquiry, they come to understand it as the basis for ongoing and significant change work. During this final stage of the inquiry spiral, the inquiry team has a chance to be reflective about the gains they have made and the professional learning that has helped them move forward. This is the place to think about how teams can build on their accomplishments. One question or focus area inevitably leads to the next.

### **Conclusion: connecting frameworks**

Our experience with combining the two frameworks has been that professional learning is more powerful when both frameworks are used simultaneously. We find that practising educators and teacher candidates benefit from first learning and then working with the seven learning principles. This is especially important for teachers working at the intermediate and secondary levels because of the emphasis at these upper age levels on coverage of curriculum. In our jurisdiction, the primary educators have always paid a great deal of attention to what we know

about the learning process. The recent response of educators at all levels from early childhood through to higher education has been positive to the learning framework as a workable set of principles to shape more innovative practices and learning environments province-wide. Inquiry cycles bring the learning principles to life for young people and their educators.

In summary, we have found that the design of more innovative and inquiring learning environments require professional learning approaches that are sustained and curiosity-driven. Inquiry networks that are sustained over time can act as innovation centres for the support and development of formal and informal teacher leaders. Working persistently with two substantive intellectual frameworks provides coherence while at the same time creating space for broad explorations of new pedagogical practices and more responsive learning settings.

Some formal research and evaluation studies have taken place (McGregor 2013) and more are needed. However, a substantial and significant number of practitioners, academics and policymakers are finding the current work of combining learning principles and inquiry spirals a highly productive way forward. More learners are acquiring an additional indigenous worldview, more learners are becoming intellectually engaged and more learners are moving towards their high school completion ceremonies equipped with genuine options for their lives as citizens and community members. As the work of the innovative learning environments becomes more broadly known internationally we will be interested to learn if other jurisdictions, including those in Europe, find the combination of sustained, persistent effort around tough goals, an ongoing networking strategy using a spiral of inquiry for coherence and a learning principles framework a powerful change strategy for educators and the communities they serve.

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